

REMARKS

This paper is responsive to the Final Office Action mailed August 9, 2007. Claims 16-20 and 27-31 are pending in this application. New claim 32 is added. Applicants submit that no new matter is added, as support for the amendments exists in the specification and claims as originally filed.

Rejection under 35 U.S.C. § 103(a)

The Office Action rejects claims 16-20 and 27-30 as obvious under 35 U.S.C. § 103(a) over Chen *et al.* (U.S. Patent No. 5,341,932) ("Chen"), Hasebe *et al.* (U.S. Patent No. 5,863,863) ("Hasebe") and Sato *et al.* (U.S. Patent No. 5,998,332) ("Sato").

According to the Office Action, Chen teaches aqueous formulations comprising agrochemicals such as herbicides including glufosinate, electrolytes such as inorganic salts, and other additives such as surfactants, including betaine derivatives, solvents, dispersants, etc. *See* Office Action at 2. The Office Action states that Hasebe teaches liquid enhancer compositions for amino acid herbicides such as glyphosate, bialaphos, and glufosinate comprising tertiary amines such as betaine and an oxalic acid compound. *See id.* According to the Office Action, other components may include surfactants, and Table 1 of Hasebe lists several compositions comprising polyoxyethylated fatty amine/ammonium compounds. *See id.* With regard to Sato, the Office Action states that this reference teaches high concentration glyphosate compositions having activity enhancing surfactants such as trialkylbetaines and alkyl glycosides at amounts ranging from 2 to 25% by weight, with optional additives such as inorganic salts, and additional active agents such as bialaphos and glufosinate. *See* Office Action at 3. According to the Office Action, one of ordinary skill in the art would have been motivated to combine the teachings of

Chen, Hasebe, and Sato “because they disclose components, which are useful for formulating and enhancing the activity of aqueous glyphosate or aminophosphate herbicide compositions. Office Action at 3. Applicants respectfully traverse.

Applicants respectfully submit that the Office Action does not establish a *prima facie* case of obviousness. Chen is directed to packaging and formulations that are suitable for containment. In contrast, Hasabe and Sato are directed to compositions with increased activity. One of ordinary skill in the art seeking to improve the activity or effectiveness of an herbicidal composition would not have been motivated to combine the packaging/containment disclosure of Chen with the teachings of Hasebe and Sato, and it would not have been obvious to one of ordinary skill in the art to combine the teachings of the references to arrive at the present invention.

Nevertheless, even if the Examiner maintains that a *prima facie* case has been established, Applicants respectfully submit that such case is overcome by the showing below of unexpected results. In response to Applicants' prior arguments, the Office Action states, *inter alia*, that “applicants do not provide a showing of unexpected results for a glyphosate composition comprising a betaine surfactant in comparison to a glyphosate composition comprising an alkoxyated amine surfactant.” Office Action at 4. Applicants provide data below, which Applicants respectfully submit demonstrates such unexpected results.

Experimental Results

The following stable formulations were prepared. Herbicidal activity was evaluated in green house trials on several weeds 28 days after application of 1 pint/acre of the formulation on the weeds. The score represents the growth inhibited by the herbicide as an average for all the weeds. (Higher scores are better.)

Example (principal surfactant + additive iv):

- glyphosate isopropylamine salt (as acid equivalent): 450 g/L
- Alkylbetaine - as active % 1.5%
- Alkyl polyglycoside (additive iv) – as active % 2.5%

Score: 97

Comparative Example 1 (ethoxylated amine alone):

- glyphosate isopropylamine salt (as acid equivalent): 450 g/L
- Tallow amine ethoxylate (additive i alone) - as active % 10%

Score: 97

Comparative Example 2 (ethoxylated amine alone):

- glyphosate isopropylamine salt (as acid equivalent): 450 g/L
- Alkylbetaine - as active % 3%

Score: 91

Comparative Example 3 (ethoxylated amine alone):

- glyphosate isopropylamine salt (as acid equivalent): 450 g/L
- Alkylbetaine - as active % 1.5%

Score: 93

Comparison of the Example with Comparative Example 1 shows very high efficacy with much less additive—indeed, the same efficacy with 2.5 active % of additive for the Example as compared with 10 active % of additive for Comparative Example 1. Comparison of the Example and Comparative Example 2 shows higher efficacy with slightly less additive (2.5% in the Example vs. 3% in Comparative Example 2). The use of less additive is beneficial because it enables lower cost and more eco-friendly products. Moreover, this result was completely unexpected, as the use of less additive would be expected to result in reduced activity.

Accordingly, Applicants respectfully submit that the subject matter of the present claims is not obvious at least in view of the above showing of unexpected results. Withdrawal of the rejection is respectfully requested.

Conclusion

Applicants submit that all claims are in condition for allowance; notice to that effect is hereby solicited. Should any issues remain to be discussed in this application, the examiner is invited to contact the undersigned by telephone.

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By:

Respectfully submitted,
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